

## **REMARKS**

**Status of Claims in Application.** Claims 1, 10, 16, 17, 18, 23 and 26 have been amended. Claims 30-40 have been added to this application. Accordingly, Claims 1-40 are active in this application. Reconsideration is respectfully requested.

**Brief Discussion of Invention.** Applicants' invention relates to novel gasoline-oxygenate blends suitable for use in automotive engines. The claimed RVP and alcohol specifications in the claimed gasoline-oxygenate blends of Applicants can only be obtained by adjustment of the base fuel composition.

**Examiner's Rejection of Claims Over *Jarvis*.** The Examiner has rejected Claims 1, 4-10, 13-18 and 21-29 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,679,117 (*Jarvis*). This ground for rejection is traversed.

While *Jarvis* discloses a "final product" containing ethanol having a vapor pressure of 6 to 8 PSI, the products illustrated in *Jarvis* are *not* pump gasolines having a PSI within the claimed range of Applicants. This is illustrated in the accompanying Declaration of Charles A. Lieder, Ph.D. Under 37 CFR § 1.132. In the Declaration, Dr. Lieder addresses each of the passages in *Jarvis* wherein a RVP range is discussed and concludes that, based on the disclosure of *Jarvis*, the RVP for pump gasolines would be outside of the range claimed by Applicants.

(i.) The minimum RVP of the "final liquid product 60" of column 5 of *Jarvis* containing 53.03 vol. % butane and 42.75 vol. % ethanol, is approximately 37.16. Thus, the "high octane gasoline" prepared by adding 20% by volume of final liquid product 60 to 80 octane gasoline would at best have a RVP of 7.4. While lines 24-28 of column 5 describes the "resulting

mixture” as having a “vapor pressure in the range of 4 to 19 pounds per square inch”, the theoretical RVP of the mixture could not be between 4 to 7.4. *See* paragraph 6 of Declaration;

(ii.) The theoretical RVP for the product containing one half of natural gasoline and one half of ethanol, described in lines 65-67 of column 5 of *Jarvis*, would at best be 16.66 PSI. It could not have a “vapor pressure of 1.5 to 8.0 psi” as reported in lines 65-67 of column 6 of *Jarvis*. *See* paragraph 8 of Declaration.

(iii.) It is unclear what “final product” is being referenced in lines 27-28 of column 6 of *Jarvis* wherein it is described that the “final product” is a “pump gasoline” having a “vapor pressure in the range from 6 to 8 psi”. In particular, it is unclear as to if this “final product” references final liquid product 60 or a mixture of “final liquid product 60” with a hydrocarbon stream. *Assuming arguendo* that the passage refers to a gasoline-oxygenate blend, it would be outside of the claims of Applicants because such a “final product”, if it were to have a minimum RVP of less than 7.2 PSI, could not be characterized as a “pump gasoline” or a blend “suitable for combustion in an automotive engine” as set forth in the claims of Applicants. *See* paragraph 9 of Declaration.

**Examiner’s Rejection of Claims Over Paul.** The Examiner has further rejected Claims 1, 4-10, 13-18 and 21-29 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 65,697,987 (“*Paul*”). This ground for rejection is also traversed.

*Paul* discloses a motor fuel composition containing between about 25 to about 55 percent by volume ethanol (lines 55-57 of column 7). The crux of *Paul* is the use of an alcohol-compatible heterocyclic co-solvent. It is the co-solvent which serves to depress the vapor pressure of the blend. *See* lines 58-62 of column 5 of *Paul*.

The claims of Applicants are not anticipated by *Paul* because:

(a.) the blends of Applicants' Claims 1-9, 17, 26-29 and 42 contain less than or equal to 10 volume percent alcohol;

(b.) the oxygenate stream of Applicants' Claims 10-16 and 23-25 consists essentially of an alcohol;

(c.) the blends of Applicants' Claims 18-22 contain a benzene content greater than 0.27 volume percent (*see* Sample X on page 25);

(d.) the blends of Applicants' Claims 30-33 have an aromatic content greater than 16.76 volume percent (*see* Sample H on page 24);

(e.) the blends of Applicants' Claims 34-37 have an olefins content greater than 1.15 volume percent (*see* Sample Q1 on page 25);

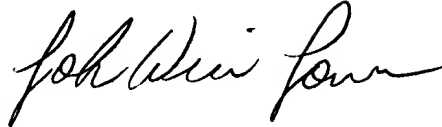
(f.) the blends of Applicants' Claims 38-40 are prepared wherein the alcohol is used to adjust the hydrocarbon base fuel to render a Dry Vapor Pressure Equivalent of no greater than 7.2 PSI.

None of these parameters are disclosed in *Paul*. The rejection, therefore, over *Paul* should not be maintained.

### **CONCLUSIONS**

In view of the foregoing amendments and remarks, Applicants respectfully request the Examiner to issue a Notice of Allowance. The Examiner is invited to telephone the undersigned should it be deemed prudent to expedite examination of this application.

Respectfully submitted,



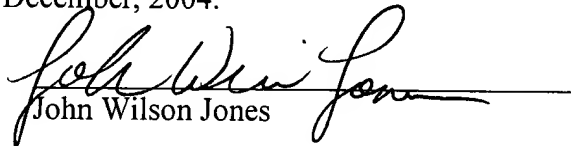
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**CERTIFICATE OF MAILING UNDER 37 CFR 1.8(a)**

I hereby certify that this correspondence is being mailed to the Assistant Commissioner for Patents, attention to Examiner Cepha D. Toomer, Washington, D.C. 20231, in accordance with 37 C.F.R. § 1.8(a), on this 13<sup>th</sup> day of December, 2004.



John Wilson Jones